

## DAFTAR PUSTAKA

- Adawiyah, N. R. 2013. Skrining, Isolasi, dan Uji Aktivitas Antibakteri Metabolit Bioaktif Jamur Endofit dari Tanaman Kina (*Cinchona pubescens* Vahl.). *Skripsi*. Universitas UIN Syarif Hidayatullah. Jakarta.
- Aman, M. J. 2018. Integrated Biotherapeutics. *Human Vaccines & Immunotherapeutics* 14(6): 1308-1310.
- Andayani, Yayuk dan E. R. Gunawan. 2019. Analisis Senyawa Triterpenoid dari Hasil Fraksinasi Ekstrak Air Buah Buncis (*Phaseolus vulgaris* Linn). *Chemistry progress* 6(2).
- Aryal, S. 2019. Biochemical Test and Identification of *Staphylococcus aureus*. <https://microbiologyinfo.com/biochemical-test-and-identification-of-staphylococcus-aureus/> [21 November 2020].
- Asgeirsson, H., A. Thalme, dan O. Weiland. 2017. *Staphylococcus aureus* Bacteraemia and Endocarditis-Epidemiology and Outcome: a Review. *Infectious Diseases* 50(3): 175-192.
- Balouiri, M., M. Sadiki, dan S. K. Ibsouda. 2016. Methods for In Vitro Evaluating Antimicrobial activity: A review. *Journal of Pharmaceutical Analysis* 6(2): 71-79.
- Bapodara, Manisha, K. Nagani, dan S. Chanda. 2011. Pharmacognostic and Physicochemical Study of *Punica granatum* L. Leaf. *Pharmacognosy Journal* 3(21) (2011): 29-32.
- Belkacem, N., R. Djaziri, dan F. Lahfa. 2014. Phytochemical Screening and In Vitro Antioxidant Activity of Various *Punica granatum* L. Peel Extracts from Algeria: a Comparative Study. *Phytothérapie* 12(6): 372-379.
- Bimakr, M., R. A. Rahman, F. S. Taip, A. Ganjloo, L. M. Salleh, J. Selamat, A. Hamid, dan I. S. M. Zaidul. 2011. Comparison of Different Extraction Methods for The Extraction of Major Bioactive Flavonoid Compounds from Spearmint (*Mentha spicata* L.) Leaves. *Food and Bioproducts Processing* 89(1): 67-72.
- Mohammed, C., A. Mohamed, A. Ahmed, dan A. Mariod. 2020. Antioxidant and Anti-Diabetic Activity of Pomegranate (*Punica granatum* L.) leaves extracts. *Foods and Raw Materials* 8(2): 329-336.
- Depkes RI. 2000. *Parameter Standar Umum Ekstrak Tumbuhan Obat*. Departemen Kesehatan Republik Indonesia. Jakarta.
- Depkes RI. 2008. *Farmakope Herbal Indonesia*. Edisi IV. Direktorat Jenderal Pengawasan dan Obat dan Makanan. Jakarta.
- Depkes RI. 2014. *Farmakope Indonesia*. Edisi V. Departemen Kesehatan Republik Indonesia. Jakarta.
- Depkes RI. 2017. *Farmakope Herbal Indonesia*. Edisi II. Departemen Kesehatan Republik Indonesia. Jakarta.
- Dewanjee, S., M. Gangopadhyay, N. Bhattacharya, R. Khanra, dan T. Kanti. 2015. Bioautography and Its Scope in The Field of Natural Product Chemistry. *Journal of Pharmaceutical Analysis* 5(2): 75-84.
- Elfalleh, W., N. Tlili, N. Nasri, Y. Yahia, H. Hannachi, N. Chira, M. Ying, dan A. Ferchichi. 2012. Total Phenolic Contents and Antioxidant Activities of

- Pomegranate Peel, Seed, Leaf and Flower. *Journal of Medicinal Plants Research* 6(32): 4724-4730.
- El-Said, M. M., H. F. Haggag, H. M. F. El-Din, A. S. Gad, dan A. M. Farahat. 2014. Antioxidant Activities and Physical Properties of Stirred Yoghurt Fortified with Pomegranate Peel Extracts. *Annals of Agricultural Sciences* 59(2): 207-212.
- Erikawati, D., D. Santosaningsih, dan S. Santoso. 2016. Tingginya Prevalensi MRSA pada Isolat Klinik Periode 2010-2014 di RSUD Dr. Saiful Anwar Malang, Indonesia. *Jurnal Kedokteran Brawijaya* 29(2): 149-156.
- Fabri, R. L., M. S. Nogueira, J. D. R. Bouzada, dan E. Scio. 2011. Identification of Antioxidant and Antimicrobial Compounds of Lippia Species by Bioautography. *Journal of Medicinal Food* 14(7-8): 840-846.
- Fadhilah, I. 2012. Uji Aktivitas Antimikroba Ekstrak Daun Sirsak (*Annona muricata* L.) Terhadap Beberapa Mikroba Patogen. *Skripsi*. Universitas Islam Negeri Alauddin. Makassar.
- Gemmell, C. G., D. I. Edwards, A. P. Fraise, F. K. Gould, G. L. Ridgway, dan R. E. Warren. 2006. Guidelines for The Prophylaxis and Treatment of Methicillin-Resistant *Staphylococcus aureus* (MRSA) Infections in The UK. *Journal of Antimicrobial Chemotherapy* 57(4): 589-608.
- Haidari, M., M. Ali, S. W. Casscells, dan M. Madjid. 2009. Pomegranate (*Punica granatum*) Purified Polyphenol Extract Inhibits Influenza Virus and Has a Synergistic Effect with Oseltamivir. *Phytomedicine* 16(12): 1127-1136.
- Harborne, J. B. 1987. *Metode Fitokimia*. Edisi II. ITB. Bandung.
- Health Protection Scotland in NHS (National Health Service). *Staphylococcus Aureus* Bacteraemia Surveillance. 2020. <https://www.hps.scot.nhs.uk/a-to-z-of-topics/staphylococcus-aureus-bacteraemia-surveillance/> [20 November 2020].
- Hikmawati. 2018. Aktivitas Antibakteri Metabolit Sekunder Isolat Actinomycetes KC 3.1 dari Rizosfer Kumis Kucing (*Orthosiphon stamineus*). *Skripsi*. Universitas Hasanuddin. Makassar.
- Hutchings, M. I., A. W. Truman, dan B. Wilkinson. 2019. Antibiotics: Past, Present and Future. *Current Opinion in Microbiology* 51: 72-80.
- Kemenkes RI. 2011. *Pedoman Umum Panen dan Pascapanen Tanaman Obat*. Badan Litbang Kesehatan Balai Besar Penelitian dan Pengembangan Tanaman Obat Tradisional. Jakarta.
- Kern, W. V. dan S. Rieg. 2020. Burden of Bacterial Bloodstream Infection—a Brief Update on Epidemiology and Significance of Multidrug-Resistant Pathogens. *Clinical Microbiology and Infection* 26(2): 151-157.
- Kostka, T., J. J. O. Potthoff, K. Bribiva, S. Matsugo, P. Winterhalter, dan T. Esatbeyoglu. 2020. Pomegranate (*Punica granatum* L.) Extract and Its Anthocyanin and Copigment Fractions—Free Radical Scavenging Activity and Influence on Cellular Oxidative Stress. *Food* 9(11): 1617.
- Kusumaningtyas, E., E. Astuti, dan Darmono. 2008. Sensitivitas metode bioautografi kontak dan agar overlay dalam penentuan senyawa antikapang. *Jurnal Ilmu Kefarmasian Indonesia* 6(2): 75-80.

- Kurniawati E. 2017. Daya Antibakteri Ekstrak Etanol Tunas Bambu Apus terhadap Bakteri Escherichia coli dan *Staphylococcus aureus* secara In Vitro. *Jurnal Wiyata: Penelitian Sains dan Kesehatan* 2(2):193-9.
- Lan, J., F. Lei, L. Hua, Y. Wang, D. Xing, dan L. Du. 2009. Transport Behavior of Ellagic Acid of Pomegranate Leaf Tannins and Its Correlation with Total Cholesterol Alteration in HepG2 Cells. *Biomedical Chromatography* 23(5): 531-536.
- Landrum, M. C. N., C. Cook, U. Chukwuma, M. W. Ellis, D. R. Hospenthal, dan C. K. Murray. 2012. Epidemiology of *Staphylococcus aureus* Blood and Skin and Soft Tissue Infections in The US Military Health System, 2005-2010. *Jama* 308(1): 50-59.
- Li, J., T. Ding, X. Liao, S. Chen, X. Ye, dan D. Liu. 2017. Synergetic Effects of Ultrasound and Slightly Acidic Electrolyzed Water Against *Staphylococcus aureus* Evaluated by Flow Cytometry and Electron Microscopy. *Ultrasonics Sonochemistry* 38: 711-719.
- Liu, C., X. Zhao, J. Yan, Z. Yuan, dan M. Gu. 2020. Effects of Salt Stress on Growth, Photosynthesis, and Mineral Nutrients of 18 Pomegranate (*Punica granatum*) Cultivars. *Agronomy* 10(1): 17.
- Magangana, T. P., N. P. Makunga, O. A. Fawole, dan U. L. Opara. 2020. Processing Factors Affecting the Phytochemical and Nutritional Properties of Pomegranate (*Punica granatum* L.) Peel Waste: A Review. *Molecules* 25(20): 4690.
- Magyarics, Z., F. Leslie, J. Bartko, H. Rouha, S. Luperchio, C. Schörgenhofer, M. Schwameis, U. Derhaschnig, H. Lagler, L. Stiebellehner, C. Firbas, S. Weber, E. Campanaro, B. Jilma, E. Nagy, dan C. Stevens. 2019. Randomized, Double-Blind, Placebo-Controlled, Single-Ascending-Dose Study of The Penetration of a Monoclonal Antibody Combination (ASN100) Targeting *Staphylococcus aureus* Cytotoxins in the Lung Epithelial Lining Fluid of Healthy Volunteers. *Antimicrobial Agents and Chemotherapy* 63(8): e00350-19.
- Marston, A. 2011. Thin-Layer Chromatography with Biological Detection in Phytochemistry. *Journal of Chromatography A* 1218(19): 2676-2683.
- Masúd, F., dan Puspitasari. 2017. Studi Pendahuluan Ekstraksi Bertingkat Minyak Biji Mangga Arumanis (*Mangifera indica*) Menggunakan Pelarut N-Heksan dan Etanol. *Jurnal Intek* 4(1): 42-48.
- Mayoclinic. Staph Infection. 2020. <https://www.mayoclinic.org/diseases-conditions/staph-infections/symptoms-causes/syc-20356221> [23 November 2020].
- Medved'ová, A. dan L. Valík. 2012. *Staphylococcus aureus*: Characterisation and Quantitative Growth Description in Milk and Artisanal Raw Milk Cheese Production. *Structure and Function of Food Engineering*. 71-102.
- Michigan State University. Antimicrobial Resistance Learning Site Pharmacology: Spectrum of Activity. 2011. <http://amrls.cmv.msu.edu/pharmacology/antimicrobials/spectrum-of-activity> [23 November 2020]
- Miklasińska-Majdanik, M., M. Kępa, R. D. Wojtyczka, D. Idrzik, dan T. J. Wąsik. 2018. Phenolic Compounds Diminish Antibiotic Resistance of

- Staphylococcus aureus* Clinical Strains. *International Journal of Environmental Research and Public Health* 15(10): 2321.
- Miller, J. M. 2009. "Chromatography" in *Digital Encyclopedia of Applied Physics*. Wiley Online Library. 1055-1102.
- Miller, L. S., V. G. Fowler Jr., S. K. Shukla, W. E. Rose, Dan R. A. Proctor. 2020. Development Of A Vaccine Against *Staphylococcus aureus* Invasive Infections: Evidence Based on Human Immunity, Genetics and Bacterial Evasion Mechanisms. *FEMS Microbiology Reviews* 44(1): 123-153.
- Molyneux, P. 2004. The Use of The Stable Free Radical Diphenylpicrylhydrazyl (DPPH) For Estimating Antioxidant Activity. *Songklanakarin J. sci. technol* 26(2): 211-219.
- Mukherjee, P. K. 2019. "Thin-Layer Chromatography for Evaluation of Herbal Drugs" in *Quality Control and Evaluation of Herbal Drugs*. Elsevier. 329-376.
- National Center for Biotechnology Information (NCBI). PubChem Compound Database Ciprofloxacin. 2018. <https://pubchem.ncbi.nlm.nih.gov/compound/Ciprofloxacin> [23 November 2020].
- Nemeth, J., G. Oesch, dan S. P. Kuster. 2015. Bacteriostatic Versus Bactericidal Antibiotics For Patients with Serious Bacterial Infections: Systematic Review and Meta-Analysis. *Journal of Antimicrobial Chemotherapy* 70 (2): 382-395.
- Nickerson, E.K., T.E. West, N. P. Day, dan S. J. Peacock. 2009. *Staphylococcus aureus* Disease and Drug Resistance in Resource-Limited Countries in South and East Asia. *The Lancet Infectious Diseases* 9(2): 130-135.
- Nomer, N. M. G. R., A. S. Duniaji, dan K. A. Nocianitri. 2019. Kandungan Senyawa Flavonoid dan Antosianin Ekstrak Kayu Secang (*Caesalpinia sappan* L.) serta Aktivitas Antibakteri terhadap *Vibrio cholerae*. *Jurnal Ilmu dan Teknologi Pangan* 8(2): 216-225.
- Nurhayati, L. S., N. Yahdiyani, dan A. Hidayatulloh. 2020. Perbandingan Pengujian Aktivitas Antibakteri Starter Yogurt dengan Metode Difusi Sumuran dan Metode Difusi Cakram. *Jurnal Teknologi Hasil Peternakan* 1(2): 41-46.
- Nuryah, A., N. Yuniarti, dan I. Puspitasari. Prevalensi dan Evaluasi Kesesuaian Penggunaan Antibiotik pada Pasien dengan Infeksi Methicillin Resistant *Staphylococcus aureus* di RSUP Dr. Soeradji Tirtonegoro Klaten. *Majalah Farmaseutik* 15(2): 123-129.
- Omoregie, E. H., K. O. Folashade, I. Ibrahim, O. P. Nkiruka, A. M. Sabo, O. S. Koma, dan O. J. Ibumeh. 2010. Phytochemical Analysis and Antimicrobial Activity. *New York Science Journal* 3(12): 91-98.
- Oxoid Ltd (Thermo Fisher Scientific). 2020. Isolating *Staphylococcus aureus*. <http://www.oxoid.com/uk/blue/techsupport/its.asp?itsp=feature&page=feature3> [21 November 2020].
- Oyong, N., D. Anggraini, dan Karina Karina. 2016. Pola Resistensi Bakteri Penyebab Sepsis Neonatorum di Instalasi Perawatan Neonatus RSUD Arifin Achmad Riau. *Sari Pediatri* 17 (6): 435-440.
- Padmasari, P. D., K. W. Astuti, dan N. K. Warditiani. 2013. Skrining Fitokimia

- Ekstrak Etanol 70% Ripang Bangle (*Zingiber purpureum* Roxb.). *Jurnal Farmasi Udayana* 2(4): 279764.
- Paramita, S., Yadi, dan Yuniaty. 2018. Analisis Bioautografi Kromatografi Lapis Tipis dan Aktivitas Antibakteri Ekstrak Etanol Bawang Tiwai (*Eleutherine bulbosa* (Mill.) Urb.) Terhadap Methicillin-resistant *Staphylococcus aureus* (MRSA). *Jurnal Sains dan Kesehatan* 1(9): 470-478.
- Parseh, H., S. Hassanpour, Z. E. Djome, dan A. S. Lavasani 2012. Antimicrobial properties of Pomegranate (*Punica granatum* L.) as a Tannin Rich Fruit: a Review. The 1st International and the 4th National Congress on Recycling of Organic Waste in Agriculture 86-92.
- Prestiandari, E., S. Hernawati, dan L. R. Dewi. 2018. Daya Hambat Ekstrak Buah Delima Merah (*Punica granatum* Linn) terhadap Pertumbuhan *Staphylococcus aureus* (The Inhibition of Red Pomegranate Fruit Extract (*Punica granatum* Linn) on The Growth of *Staphylococcus aureus*). *Pustaka Kesehatan* 6(1): 192-198.
- Pusat Data dan Informasi. 2013. Delima (*Punica granatum* L.). <http://www.pdpersi.co.id/>. 5 November 2020 (16:17).
- Putri, R. M., V. E. Diana, dan K. Fitri. 2019. Perbandingan Uji Aktivitas Antibakteri dari Ekstrak Etanol Bunga, Daun dan Akar Tumbuhan Rosella (*Hibiscus sabdariffa* L.) Terhadap Bakteri *Staphylococcus aureus*. *Jurnal Dunia Farmasi* 3(3): 131-143.
- Qu, W., A. P Breks III, Z. Pan, H. Ma, dan T. H. Mchugh. 2012. Storage Stability of Sterilized Liquid Extracts from Pomegranate Peel. *Journal of Food Science* 77(7): C765-C772.
- Rahmadani, Fitri. 2015. Uji Aktivitas Antibakteri dari Ekstrak Etanol 96% Kulit Batang Kayu Jawa (*Lannea coromandelica*) terhadap Bakteri *Staphylococcus aureus*, *Escherichia coli*, *Helicobacter pylori*, *Pseudomonas aeruginosa*. Skripsi. Universitas UIN Syarif Hidayatullah. Jakarta.
- Reich, E. 2000. "Chromatography: Thin-Layer (Planar)" in *Encylopedia of Separation Science*. Historical Development. 834-839.
- Rini, A. A. 2016. Skrining Fitokimia dan Uji Antibakteri Ekstrak Etanol Buah Kawista (*Limonia acidissima* L.) dari Daerah Kabupaten Aceh Besar Terhadap Bakteri *Escherichia coli*. *Jurnal Ilmiah Mahasiswa Fakultas Keguruan dan Ilmu Pendidikan Unsyiah* 2(1): 1-12.
- Sajjad, W., M. Sohail, B. Ali, A. Haq, G. Din, M. Hayat, I. Khan, M. Ahmad, dan S. Khan. 2015. Antibacterial Activity of *Punica granatum* peel extract. *Mycopath* 13(2): 105-111.
- Sayuti, K. dan R. Yenrina. 2015. *Antioksidan Alami dan Sintetik*. Andalas University Press. Padang.
- Schlegel, S. 1994. *Mikrobiologi Umum*. Terjemahan T. Baskara. Gajahmada University Press. Yogyakarta.
- Sharma, P. C., A. Jain, S. Jain, R. Pahwa, dan M. S. Yar. 2010. Ciprofloxacin: Review on Developments in Synthetic, Analytical, and Medicinal Aspects. *Journal of Enzyme Inhibition and Medicinal Chemistry* 25(4): 577-589.

- Shaygannia, E., M. Bahmani, B. Zamanzad, dan M. R. Kopaei. 2016. A Review Study on *Punica granatum* L. *Journal of Evidence-Based Complementary & Alternative Medicine* 21(3): 221-227.
- Sinurat, A. A. P., P. P. Renta, N. E. Herliany, B. F. S. P. Negara, dan D. Purnama. 2019. Uji Aktivitas Antibakteri Ekstrak Metanol Rumput Laut *Gracilaria edulis* Terhadap Bakteri *Aeromonas hydrophila*. *Jurnal Enggano* 4(1): 105-114.
- Siregar, A. F., A. Sabdono, dan D. Pringgenies. 2012. Potensi Antibakteri Ekstrak Rumput Laut Terhadap Bakteri Penyakit Kulit *Pseudomonas aeruginosa*, *Staphylococcus epidermidis*, dan *Micrococcus luteus*. *Journal of Marine Research* 1(2): 152-160.
- Synder, C. R., J. J. Kirkland, dan J. L. Glajach. 1997. *Practical HPLC Method Development*. Edisi II. NewYork (US): John Wiley dan Sons.
- Suman, M., dan P. Bhatnagar. 2019. A Review on Proactive Pomegranate one of The Healthiest Foods. *International Journal of Chemical Studies* 7(3): 189-194.
- Surjowardojo, P., T. Eko Susilawati, dan G. R. Sirait. 2016. Daya Hambat Dekok Kulit Apel Manalagi (*Malus sylvestris* Mill.) terhadap pertumbuhan *Staphylococcus aureus* dan *Pseudomonas* sp. penyebab mastitis pada sapi perah. *Journal of Tropical Animal Production* 16(2): 40-48.
- Susanto, D., Sudrajat, dan R. Ruga. 2012. Studi Kandungan Bahan Aktif Tumbuhan Meranti Merah (*Shorea leprosula* Miq) sebagai Sumber Senyawa Antibakteri. *Mulawarmnan Scientifica* 11 (2): 181-190.
- Tehranifar, A., Y. Selahvarzi, M. Kharrazi, dan V. J. Bakhsh. 2011. High Potential of Agro-Industrial by-Products of Pomegranate (*Punica granatum* L.) as The Powerful Antifungal and Antioxidant Substances. *Industrial Crops and Products* 34(3): 1523-1527.
- Tiwari, P., B. Kumar, M. Kaur, G. Kaur. dan H. Kaur. 2011. Phytochemical Screening and Extraction: a Review. *Internationale pharmaceutica sciencia* 1(1): 98-106.
- Trabelsi, A., M. A. E. Kaibi, A. Abbassi, A. Horchani, L. C. Ghedira, dan K. Ghedira. 2020. Phytochemical Study and Antibacterial and Antibiotic Modulation Activity of *Punica granatum* (Pomegranate) Leaves. *Scientifica*: 1-7.
- USDA (United State Department of Agriculture). 2011. *Punica granatum* L. USDA National Nutrient Database for Standart Reference. United States. [www.plants.usda.gov/core/profile?symbol=PUGR2](http://www.plants.usda.gov/core/profile?symbol=PUGR2). 2 November 2020 (17:43).
- Verdiana, M., I. W. R. Widarta, dan I. D. G. M. Permana. 2018. Pengaruh Jenis Pelarut pada Ekstraksi Menggunakan Gelombang Ultrasonik terhadap Aktivitas Antioksidan Ekstrak Kulit Buah Lemon (*Citrus limon* (Linn.) Burm F.). *Jurnal Ilmu dan Teknologi Pangan* 7(4): 213-222.
- Viswanatha G. L., M. V. Venkataranganna, dan N. B. L. Prasad. 2019. Methanolic Leaf Extract of *Punica granatum* Attenuates Ischemia-Reperfusion Brain Injury in Wistar Rats: Potential Antioxidants and Anti-Inflammatory Mechanisms. *Iranian Journal of Basic Medical Sciences* 22(2): 187-196.

- Wahyuni, Yeni S, S. Pandanwangi, dan T. V. Febriawan. Uji Aktivitas Mukolitik Suspensi Ekstrak Daun Delima (*Punica granatum* L.) terhadap Viskositas Mukus Usus Sapi secara *In Vitro* 4(2): 24-31
- Wang, C., L. Shi, L. Fan, Y. Ding, S. Zhao, Y. Liu, dan C. Ma. 2012. Optimization of Extraction and Enrichment of Phenolics from Pomegranate (*Punica granatum* L.) Leaves. *Industrial Crops and Products* 42: 587-594.
- Wati, Sari. 2001. Efektifitas Dimethylformamide (DMF) sebagai Krioprotektan untuk Kriopreservasi Ookista *Eimeria tenella* yang Disimpan dalam Nitrogen Cair Bersuhu-196° C. *Disertasi*. Bogor Agricultural University (IPB). Bandung
- Weerakkody, P., J. Jobling, M. M. V. Infante, dan G. Rogers. 2010. The Effect of Maturity, Sunburn and The Application of Sunscreens on The Internal and External Qualities of Pomegranate Fruit Grown in Australia. *Scientia Horticulturae* 124(1): 57-61.
- Yarovoy, J.Y., A. A. Monte, B. C. Knepper, dan H. L. Young. 2019. Epidemiology of Community-Onset *Staphylococcus aureus* Bacteremia. *Western Journal of Emergency Medicine* 20(3): 438-442.